TRANSPARENCY MASTER

Thermodynamic Data

95A

Substance	△H ⁰ _f (kJ/mol)	S ⁰ (J/mol·K)	ΔG_f^0 (kJ/mol)
Ag(s)	0.0	42.7	0.0
AgCl(s)	-127.1	96.2	-109.8
AgNO ₃ (s)	-124.4	140.9	-33.5
Al(s)	0.0	28.3	0.0
AlCl ₃ (s)	-705.6	110.7	-628.9
Al ₂ O ₃ (s, corundum)	-1676.0	51.0	-1582.4
$Br_2(l)$	0.0	152.2	0.0
$Br_2(g)$	30.9	245.5	30.9
C (s, diamond)	1.9	2.4	2.90
C (s, graphite)	0.0	5.7	0.0
CCl ₄ (l)	-132.8	216.2	-65.3
CCl ₄ (g)	-95.8	309.9	-60.2
CH ₃ OH(l)	-239.1	127.2	-166.4
CH ₄ (g)	-74.9	186.3	-50.8
CO(g)	-110.5	197.6	-137.2
$CO_2(g)$	-393.5	213.8	-394.4
$CS_2(g)$	117.1	237.8	67.2
$C_2H_6(g)$	-83.8	229.1	32.9
$C_2H_4(g)$	52.5	219.3	68.1
$C_2H_5OH(l)$	-277.0	161.0	-174.9
$C_3H_8(g)$	-104.7	270.2	-24.3
$C_4H_{10}(g, n\text{-butane})$	-125.6	310.1	-16.7
HF(g)	-272.5	173.8	-273.2
$HNO_3(g)$	-134.3	266.4	-74.8
$H_2O(g)$	-241.8	188.7	-228.6
$H_2O(l)$	-285.8	70.0	-237.2
$H_2O_2(l)$	-187.8	109.6	-120.4
$H_2S(g)$	-20.5	205.7	-33.6
H ₂ SO ₄ (l)	-814.0	156.9	-690.1
K(s)	0.0	64.7	0.0
KCl(s)	-436.7	82.6	-409.2
KNO ₃ (s)	-494.6	133.0	-394.9
KOH(s)	-424.7	78.9	-379.1
Li(s)	0.0	29.1	0.0
LiCl(s)	-408.6	59.3	-384.4
LiOH(s)	-484.9	42.8	-439.0
Mg(s)	0.0	32.7	- 0.0
MgCl ₂ (s)	-641.6	89.6	-591.8
Hg(l)	0.0	76.0	0.0
Hg ₂ Cl ₂ (s)	-264.2	192.5	-210.8
HgO(s, red)	-90.8	70.3	-55.6
$N_2(g)$	0.0	191.6	0.0
NH ₃ (g)	-45.9	192.8	-16.5
NH ₄ Cl(s)	-314.4	94.6	-203.0
NO(g)	90.3	210.8	86.6

Substance	△H _f ⁰ (kJ/mol)	S ⁰ (J/mol·K)	ΔG_f^0 (kJ/mol)
C ₆ H ₁₄ (g, n-hexane)	-167.1	388.4	0.0
C ₇ H ₁₆ (g, n-heptane)	-187.7	427.9	8.0
C ₈ H ₁₈ (g, n-octane)	-208.6	466.7	16.3
C ₈ H ₁₈ (g, iso-octane)	-224.0	423.2	12.6
CaCO ₃ (s)	-1206.9	92.9 .	-1128.8
CaCl ₂ (s)	-795.8	108.4	-748.1
$Ca(OH)_2(s)$	-986.1	83.4	-898.6
Ca(s)	0.0	41.6	0.0
CaO(s)	-634.9	38.2	-604.04
$Cl_2(g)$	0.0	223.1	0.0
Cu(s)	0.0	33.2	0.0
CuCl ₂ (s)	-220.1	108.1	-175.7
CuSO ₄ (s)	-770.0	109.3	-661.9
$F_2(g)$	0.0	202.8	0.0
Fe(s)	0.0	27.3	0.0
FeCl ₃ (s)	-399.4	142.3	-334.05
Fe ₂ O ₃ (s, hematite)	-824.8	87.4	-742.2
Fe ₃ O ₄ (s, magnetite)	-1120.9	145.3	-1015.5
$H_2(g)$	0.0	130.7	0.0
HBr(g)	-36.4	198.6	-53.4
HCl(g)	-92.3	186.8	-95.3
HCN(g)	135.1	201.7	124.7
$NO_2(g)$	33.1	240.0	51.3
$N_2O(g)$	82.4	220.0	104.2
$N_2O_4(g)$	9.1	304.4	97.8
Na(s)	0.0	51.5	0.0
NaCl(s)	-411.2	72.1	-384.2
NaOH(s)	-425.9	64.4	-379.5
$O_2(g)$	0.0	205.0	0.0
O ₃ (g)	142.7	238.9	163.2
Pb(s)	0.0	64.8	0.0
PbCl ₂ (s)	-359.4	136.2	-317.9
PbO(s, red)	-219.0	66.3	-188.95
S(s)	0.0	32.1	0.0
SO ₂ (g)	-296.8	248.1	-300.2
SO ₃ (g)	-395.8	256.8	-371.1
Si(s)	0.0	18.8	0.0
SiCl ₄ (g)	-657.0	330.9	-617.0
SiO ₂ (s, quartz)	-910.9	41.5	-856.7
Sn(s, white)	0.0	51.6	0.0
Sn(s, gray)	-2.1	44.1	0.13
SnCl ₄ (l)	-511.3	258.6	-440.2
Zn(s)	0.0	41.6	0.0
$ZnCl_2(s)$	-415.0	111.5	-369.4
ZnO(s)	-348.3	43.6	-318.32